

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method for encoding digital information, the method comprising
identifying a target code word that represents at least a portion of the digital information;
determining a set of a plurality of code words, wherein the set includes the target code word;
selecting an index, wherein the index indicates the determined set;
determining a check value for the target code word using a result of operating on the target code word with a cue; and
sending the check value and the index to a decoder, the index allowing identification of the set of the plurality of code words and the check value allowing the target code word to be determined from the set when a check value calculated for a code word in the set of the plurality of code words when operated on by a cue indicates a match for the sent check value.
2. (Original) The method of claim 1, further comprising
defining a plurality of sets of code words.
3. (Original) The method of claim 2, further comprising
defining a partition of sets of code words.
4. (canceled)
5. (Original) The method of claim 1, wherein the target code word indicates one or more pixel values in digital video information.

6. (Original) The method of claim 1, wherein the target code word indicates a macro block in a frame of digital video information.

7. (Original) The method of claim 1, further comprising quantizing the target code word.

8. (Original) The method of claim 7, wherein the digital information includes digital video information including frames and wherein the target code word is encoded using intra-coding within a given frame of the digital video information.

9. (Original) The method of claim 8, further comprising using motion prediction is used to determine a correlation noise value; and using the correlation noise value to partition a plurality of code word values into a plurality of sets.

10. (Original) The method of claim 1, further comprising transforming at least a portion of the digital information from a spatial domain into a frequency domain.

11. (Original) The method of claim 10, wherein the step of transforming includes a substep of using a discrete cosine transform.

12. (Original) The method of claim 1, further comprising classifying blocks of the digital information for subsequent processing.

13. (Original) The method of claim 12, further comprising skipping encoding a block in response to the step of classifying blocks.

14. (Original) The method of claim 12, further comprising
intra-coding a block in response to the step of classifying blocks.

15. (Original) The method of claim 12, further comprising
performing varying degrees of encoding in response to the step of classifying
blocks.

16. (Original) The method of claim 15, wherein 16 different classifications are
used, including skipping, intra-coding and 14 syndrome coding classes.

17. (currently amended) An apparatus for encoding digital information, the
apparatus comprising
a process for identifying a target code word that represents at least a portion of the
digital information;
a process for determining a set of a plurality of code words, wherein the set
includes the target code word;
a process for selecting an index, wherein the index indicates the determined set;
a process for determining a check value for the target code word using a result of
operating on the target code word with a cue; and
a process for sending the check value and the index to a decoder, the index
allowing identification of the set of the plurality of code words and the check value allowing the
target code word to be determined from the set when a check value calculated for a code word in
the set of the plurality of code words when operated on by a cue indicates a match for the sent
check value.

18. (currently amended) A computer-readable medium including instructions for
encoding digital information, the computer-readable medium comprising
one or more instructions for identifying a target code word that represents at least
a portion of the digital information;

one or more instructions for determining a set of a plurality of code words,
wherein the set includes the target code word;

one or more instructions for selecting an index, wherein the index indicates the
determined set;

one or more instructions for determining a check value for the target code word
using a result of operating on the target code word with a cue; and

one or more instructions for sending the check value and the index to a decoder,
the index allowing identification of the set of the plurality of code words and the check value
allowing the target code word to be determined from the set when a check value calculated for a
code word in the set of the plurality of code words when operated on by a cue indicates a match
for the sent check value.

19. (currently amended) A method for decoding encoded digital information, the
method comprising

receiving an index and a check value, the check value generated by an encoder
using a result of operating a cue on a target code word;

using the index to determine a set of candidate code words;

inferring a set of cues;

determining a code word by operating on the code words in the set of candidate
code words with a cue;

determining if the determined code word is the target code word when a check
value is calculated for the code word in the set of the plurality of code words when operated on
by the cue indicates a match for the received check value ~~determined for the code word that
corresponds to the received check value;~~ and

using the target code word in a decoding operation.

20. (previously presented) The method of claim 19, further comprising

determining a cue in the set of cues;

using the cue to determine a code word in the code words in the set; and

determining whether the code word produces a check value that is in agreement with the received check value.

21. (Original) The method of claim 19, wherein the cue includes a motion-based predictor.

22. (Original) The method of claim 21, wherein the step of inferring a cue includes a substep of
deriving the motion-based predictor.

23. (Original) The method of claim 22, wherein the encoded digital information includes blocks of video information, the method further comprising
decoding the encoded digital information by using the predictor and one or more code words.

24. (Original) The method of claim 23, further comprising
estimating the best way to decode the encoded digital information by using the predictor and the one or more code words.

25. (currently amended) An apparatus for decoding encoded digital information, the apparatus comprising

a process for receiving an index and a check value, the check value generated by an encoder using a result of operating a cue on a target code word;

a process for using the index to determine a set of candidate code words;

a process for inferring a set of cues;

a process for determining a code word by operating on the code words in the set of the candidate code words with a cue;

a process for determining if the determined code word is the target code word
when a check value calculated for the code word in the set of the plurality of code words when

~~operated on by the cue indicates a match for the received check value is determined for the code word that corresponds to the received check value; and~~

a process for using the target code word in a decoding operation.

26. (currently amended) A computer-readable medium including instructions for decoding encoded digital information, the computer-readable medium comprising

one or more instructions for receiving an index and a check value, the check value generated by an encoder using a result of operating a cue on a target code word;

one or more instructions for using the index to determine a set of candidate code words;

one or more instructions for inferring a set of cues;

one or more instructions for determining a code word by operating on the code words in the set of the candidate code words with a cue;

one or more instructions for determining if the determined code word is the target code word when a check value calculated for the code word in the set of the plurality of code words when operated on by the cue indicates a match for the received check value is determined for the code word that corresponds to the received check value; and

one or more instructions for using the target code word in a decoding operation.

27.-29 (canceled)

30. (Original) A method for sharing processing complexity between an encoding process and a decoding process, wherein the encoding process and the decoding process each use an index for a target codeword, a check value for the target codeword and a set of candidate cues, the method comprising

using the encoder to perform the following steps:

selecting some cues from the set of candidate cues;

operating these cues on the indexed set of codewords;

generating a check value as a result of the operating step;

determining whether the check value matches the check value for the target codeword;

signaling whether the chosen cues were successful in determining the correct codeword to the decoder;

using the decoder to perform the following steps:

selecting other cues from the set of candidate cues;

operating these cues on the indexed set of codewords based on the signal determined by the encoder;

generating a check value as a result of the operating step;

determining whether the result of the operating step produces a value that is in agreement with the check value for the target codeword

31. (original) The method of claim 30, wherein the encoding process does not use any of a set of candidate cues corresponding to a lower complexity level, wherein the decoding process uses all of a set of candidate cues corresponding to a higher complexity level.

32. (original) The method of claim 30, wherein the encoding process uses all of a set of candidate cues corresponding to a higher complexity level, wherein the decoding process uses one of a set of candidate cues corresponding to a lower complexity level.

33. (original) The method of claim 19, wherein the encoded digital information corresponds to a source that can be compressed by predictive coding, wherein the decoder includes two or more cues that produce a value that is in agreement with the check value to result in successful recovery of the target codeword.